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Atty. Docket No. PIA31205/ANS/US

**IN THE UNITED STATES PATENT & TRADEMARK OFFICE**

IN RE APPLICATION OF:

Sang Hun OH

:

: GROUP ART UNIT: 1756

APPLICATION NO: 10/764,905

:

FILED: January 26, 2004

: EXAMINER:

Sullivan, Caleen O.

FOR: Methods for Forming an Air Gap in a Semiconductor Metal Line  
Manufacturing Process

I hereby certify that this document is being facsimile transmitted to the USPTO or deposited with the United States Postal Service as first class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on March 8, 2007

By:

  
Jennie Heaton**INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §§ 1.56 AND 1.97-98**MAIL STOP AMENDMENT  
COMMISSIONER FOR PATENTS  
ALEXANDRIA, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents listed on the attached form(s) for the Examiner's consideration. One copy of each of the listed documents, other than any U.S. patents, U.S. patent publications and/or pending U.S. applications, is submitted herewith.

This Information Disclosure Statement is being filed:

- ☐ concurrently with the application, within three months of the filing date of the application, or before the mailing date of a first Office Action on the merits;
- ☐ before the mailing of a first Office Action after the filing of a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114; or
- ☒ more than three months from the filing date of this application or after the mailing date of the first Office Action on the merits, but before the mailing date of the first to occur of either: (1) a final action under 37 C.F.R. § 1.113; (2) a Notice of Allowance under 37 C.F.R. § 1.311; or (3) an action that otherwise closes prosecution in the application.

Atty. Docket No. PIA31205/ANS/US  
Application No: 10/764,905

Therefore:

- ☐ No Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.
- ☒ The fee under 37 C.F.R. § 1.17(p) accompanies this submission.

Statement under 37 C.F.R. § 1.97(e) (if applicable):

- ☐ Each item of information in the accompanying list(s) was first cited in communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- ☐ No item of information in the accompanying list(s) was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained herein was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Nothing in this Information Disclosure Statement or its submission shall be construed as an admission against interest in any manner, including as an admission or representation regarding: (i) the completeness of the list of information, (ii) the status of any listed information or document as prior art, (iii) any search that may or may not have been made, (iv) the pertinence or relevance of any listed information to this application, (v) the possible or actual materiality of the listed information to the patentability of the claims of this application, or (vi) the existence or nonexistence of other (potentially) material information. Applicant does not waive any right to take any action that would appropriate to antedate or otherwise remove any listed information or document as a competent or available reference against the claims of the present application.

Respectfully submitted,



Andrew D. Fortney, Ph.D.  
Reg. No. 34,600

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PTO/SB/08B (07-06)

Approved for use through 09/30/2008, OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Sheet	2	of	2	Application Number	10/764,905
				Filing Date	January 26, 2004
				First Named Inventor	Sang Hun OH
				Art Unit	1756
				Examiner Name	Sullivan, Calleen O.
				Attorney Docket Number	PIA31205/ANS/US

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**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	BA	Eun Seok HONG; Method for Manufacturing Semiconductor Device; Korean Patent Abstracts; Publication No. 1020030000483; Publication Date: January 6, 2003; Korean Intellectual Property Office	
	BB	Byeong Hak LEE; Method for Forming Metallic Wiring of Semiconductor Device; Korean Patent Abstracts; Publication No. 1020010059161; Publication Date: July 6, 2001; Korean Intellectual Property Office	

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/17 (07-08)

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Effective on 12/08/2004.  
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).**FEE TRANSMITTAL**  
**For FY 2005**☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$) 180**Complete if Known**

Application Number	10/784,905
Filing Date	January 26, 2004
First Named Inventor	Sang Hun OH
Examiner Name	Sullivan, Caleen O.
Art Unit	1758
Attorney Docket No.	PIA31205/ANS/US

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**METHOD OF PAYMENT (check all that apply)**☐ Check ☒ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_☐ Deposit Account Deposit Account Number: \_\_\_\_\_ Deposit Account Name: \_\_\_\_\_

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee  
☐ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☐ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

**2. EXCESS CLAIM FEES****Fee Description**

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

Fee (\$)	Small Entity Fee (\$)
50	25
200	100
360	180

**Total Claims** Extra Claims Fee (\$)

- 20 or HP = 0 x = 0

HP = highest number of total claims paid for, if greater than 20.

**Indep. Claims** Extra Claims Fee (\$)

- 3 or HP = 0 x = 0

HP = highest number of independent claims paid for, if greater than 3.

**Multiple Dependent Claims**

Fee (\$)	Fee Paid (\$)
	0

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

<b>Total Sheets</b>	<b>Extra Sheets</b>	<b>Number of each additional 50 or fraction thereof</b>	<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>
- 100 =	/ 50 =	(round up to a whole number) x		0

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)


Other (e.g., late filing surcharge): Submission of IDS Fee Under 37 CFR 1.17(p)

**Fees Paid (\$)**

0

180

**SUBMITTED BY**

Signature		Registration No. (Attorney/Agent)	34,600	Telephone	559-432-6847
Name (Print/Type)	Andrew D. Fortney, Ph.D.	Date	03-08-2007		

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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